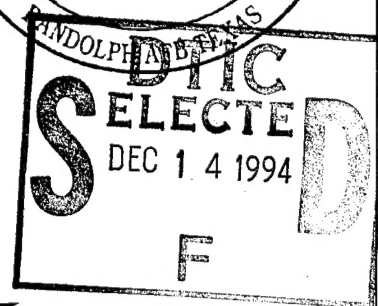
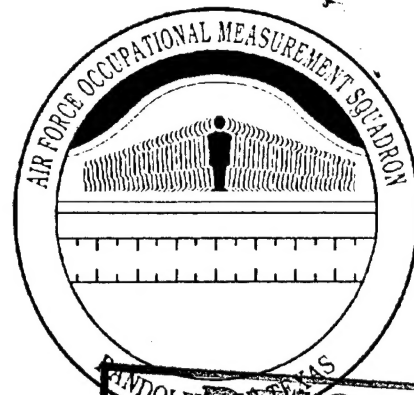




**UNITED STATES
AIR FORCE**



OCCUPATIONAL SURVEY REPORT

19941207 020

ORTHOTIC

AFSC 4U0X1

AFPT 90-919-002

OCTOBER 1994

**OCCUPATIONAL ANALYSIS PROGRAM
AIR FORCE OCCUPATIONAL MEASUREMENT SQUADRON
AIR EDUCATION and TRAINING COMMAND
1550 5th STREET EAST
RANDOLPH AFB, TEXAS 78150-4449**

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PREFACE

This report presents the results of an Air Force Occupational Survey of the AFSC 4U0X1, Orthotic, career ladder. Authority for conducting occupational surveys is contained in AFI 36-2623. Computer products used in this report are available for use by operations and training officials.

Lieutenant Shannen Karpel, Inventory Development Specialist, developed the survey instrument; Lieutenant Ann Nakamura, Occupational Analyst, analyzed the data and wrote the final report. Mr. Wayne Fruge provided computer programming support, and Ms. Raquel A. Soliz provided administrative support. Major Randall C. Agee, Chief, Airman Analysis Section, Occupational Analysis Flight, Air Force Occupational Measurement Squadron, reviewed and approved this report for release.

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel. Additional copies are available upon request to the Air Force Occupational Measurement Squadron, Attention: Chief, Occupational Analysis Flight (OMY), 1550 5th Street East, Randolph AFB, Texas 78150-4449 (DSN 487-6623)

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SUMMARY OF RESULTS

1. Survey Coverage: The AFSC 4U0X1, Orthotic, career ladder was surveyed to obtain current job and task data. Results are based on data from 25 of the 33 eligible members of the career ladder.
2. Specialty Jobs: Survey data show there are three jobs in the career ladder: General Orthotic job, Mid-Level Orthotic job, and Orthotic Management job. Twenty-three of the twenty-five respondents are included in these jobs. The remaining two members were the AF Functional Manager and a superintendent of Orthotic.
3. Career Ladder Progression: Members progress typically through the career ladder. Three-skill level members spend most of their duty time performing technical tasks, 5-skill level members have some supervisory responsibility, 7-skill level members perform a mixture of more advanced technical and supervisory tasks, while the most senior personnel are career ladder managers.
4. Training Analysis: First-enlistment personnel perform tasks related to the General Orthotic and Mid-level Orthotic jobs. A Specialty Training Standard (STS) was created for the career ladder at the June 1994 Utilization and Training Workshop as part of the Career Field Education and Training Plan. All learning objectives of the Plan of Instruction (POI) matched to tasks are supported by survey data. Training personnel should review unmatched tasks.
5. Job Satisfaction: Satisfaction indicators for members of the Orthotic career ladder are generally higher than those for members of other medical specialties surveyed in 1993. Satisfaction has remained steady over the years, but reenlistment intentions are lower than for the previous survey.
6. Implications: The present classification structure for the career ladder is supported, as is the entry-level training program. There are no observable problems with job satisfaction.

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**OCCUPATIONAL SURVEY REPORT (OSR)
ORTHOTIC CAREER LADDER
AFSC 4U0X1**

INTRODUCTION

This is a report of an occupational survey of the Orthotic career ladder conducted by the Occupational Analysis Flight, Air Force Occupational Measurement Squadron (AFOMS). The survey was conducted to update the currency of occupational survey data for this career ladder. The last survey report of this career ladder was published in December 1987.

Background

As described in the AFMAN 36-2108 *Specialty Descriptions*, 3-, 5-, and 7-skill level members construct, assemble, repair, and adjust orthoses (appliances or apparatus used to support, align, prevent, or correct a deformity and to improve functional ability) as directed by a medical officer. Orthotic personnel use shears, rivet punches, drills, lathes, saws, and other machine shop equipment and handtools to manufacture orthoses out of materials such as metals, plastics, leather, or cloth. They also make plaster impression of parts to be fitted to facilitate construction or fitting of orthoses.

Initial 3-skill level training for AFSC 4U0X1 personnel is provided through a 50-week course taught at Wilford Hall Medical Center, Lackland AFB TX. The Apprentice Orthotic course, J5AB04U031-000, covers basic anatomy, kinesiology, physiology, and treatment for pathophysiological conditions. Students are trained to interpret prescriptions for treatment; identify and safely use orthotic equipment; take measurements and make tracings; prepare negative and positive plaster of Paris molds; fabricate and fit upper, spinal, and lower extremity orthoses; locate and identify bony landmarks to ensure proper fit of orthoses; fabricate and fit molded foot orthoses; make shoe modifications; and fit soft-good or modular orthoses. Students also must complete requirements for cardiopulmonary resuscitation (CPR) certification.

Entry into the career ladder currently requires an Armed Forces Vocational Aptitude Battery (ASVAB) General score of 43 and a strength factor of G (40 lbs).

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SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was Air Force Job Inventory (JI) Air Force Personnel Test (AFPT) 90-919-002, dated November 1992. A tentative task list was prepared after reviewing pertinent career ladder publications and directives and tasks from the last AFSC 919X0 OSR. The preliminary task list was refined and validated through personal interviews with 10 subject-matter experts (SMEs) at the following locations:

<u>BASE</u>	<u>UNIT AND REASON FOR VISIT</u>
Lackland AFB TX	WHMC/SGHSBB (Training School/Medical Center)
Travis AFB CA	DGMC/SGHTOC (Large Medical Center)
USAFA CO	USAFA HOSP/SGHFO (Hospital vs. Medical Center)

The resulting JI contained a comprehensive listing of 300 tasks grouped under 10 duty headings. A background section requested information such as grade, job title, time in present job, time in service, job satisfaction, type of medical facility currently assigned to, and type of equipment operated.

Survey Administration

From April 1993 through December 1993, Military Personnel Flights at operational bases worldwide administered the inventory to eligible AFSC 4U0X1 personnel. Members eligible for the survey consisted of the total population, excluding the following: (1) hospitalized personnel; (2) personnel in transition for a permanent change of station; (3) personnel retiring during the time inventories were administered to the field; and (4) personnel in their jobs less than 6 weeks. Participants were selected from a computer-generated mailing list obtained from Headquarters Air Force Military Personnel Center, Randolph AFB TX.

Each respondent first filled in an identification and biographical information section and then checked each task performed in their current job. After checking all tasks performed, each individual rated tasks checked on a 9-point scale showing relative time spent on that task as compared to all other tasks checked. The ratings ranged from 1 (very small amount time spent) through 5 (about average time spent) to 9 (very large amount spent).

To determine relative time spent for each task, all of a respondents' ratings are assumed to account for 100 percent of that member's time spent on the job and are summed. Each task rating is then divided by the total task ratings and multiplied by 100 to provide a relative percentage of time for each task. This procedure provides a basis for comparing tasks in terms of both percent members performing and average percentage of time spent.

Survey Sample

Personnel were selected to participate in this survey to ensure an accurate representation across major commands (MAJCOMs) and paygrades. Table 1 reflects the MAJCOM distribution of AFSC 4U0X1 personnel eligible military AFSC 4U0X1 personnel, while Table 2 shows the paygrade distribution. The respondents are distributed proportionately across MAJCOMs and paygrades.

TABLE 1
MAJCOM DISTRIBUTION OF SAMPLE

COMMAND	NUMBER ASSIGNED	NUMBER IN SAMPLE
ACC	1	1
AMC	7	6
USAFE	4	2
PACAF	5	5
AETC	16	7
AFMC	3	3
USAFA	3	1
Total Assigned (As of October 1993)	39	
Total Eligible	33	
Total Surveyed	33	
Total in Sample	25	
Percent of Assigned in Sample	64%	
Percent of Surveyed in Sample	76%	

TABLE 2
PAYGRADE DISTRIBUTION OF SAMPLE

PAYGRADE	NUMBER ASSIGNED	NUMBER IN SAMPLE
E-1 to E-3	7	7
E-4	7	4
E-5	10	5
E-6	7	5
E-7	4	2
E-8	2	1
E-9	2	1

Task Factor Administration

Job descriptions alone do not provide sufficient data for making decisions about career ladder documents or training programs. Task factor information is needed for a complete analysis of the career ladder. To obtain the needed task factor data, selected senior AFSC 4U0X1 personnel (generally E-6 or E-7 technicians) also completed a training emphasis (TE) or task difficulty (TD) booklet. These booklets were processed separately from the JIs and TE and TD data, where applicable, when analyzing other issues in this report.

Training Emphasis (TE). TE is defined as how important it is for first-enlistment personnel to receive structured training on each task to perform it successfully. Structured training is defined as training provided by resident technical schools, field training detachments, mobile training teams, formal on-the-job-training (OJT), or any other organized training method. Four experienced NCOs rated tasks in the inventory on a 10-point scale ranging from 0 (not important to train) to 9 (extremely important to train). Overall agreement among the raters was acceptable. The average TE rating for AFSC 4U0X1 was 3.94, with a standard deviation of 2.90. Tasks with a TE rating of 6.84 or greater for AFSC 4U0X1 tasks are considered to be important to train.

Task Difficulty (TD). TD is defined as an estimate of how much time the average airman needs to learn how to perform each task satisfactorily. Six experienced AFSC 4U0X1 NCOs rated the difficulty of the tasks in the inventory using a 9-point scale ranging from 1 (easy to learn) to 9 (very difficult to learn). Interrater agreement for these six raters was also acceptable. TD ratings are normally adjusted so tasks of average difficulty have a value of 5.00, and a standard deviation of 1.00. Any task with a TD rating of 6.00 or above is considered difficult to learn.

When used in conjunction with the primary criterion of percent members performing, TD and TE ratings can provide insight into first-enlistment personnel training requirements. Such insights may suggest a need for lengthening or shortening portions of instruction supporting AFS entry-level jobs.

SPECIALTY JOBS (Career Ladder Structure)

The first step in the analysis process is to identify the structure of the career ladder in terms of the jobs performed by the respondents. Comprehensive Occupational Data Analysis Programs (CODAP) assist by creating an individual job description for each respondent based on the tasks performed and relative amount of time spent on the tasks. The hierarchical clustering program compares all the individual job descriptions, locates the two jobs with the most similar descriptions, and combines them to form a stage in the clustering sequence. In successive stages, new members are added to the initial group, or new stages are formed based on the similarity of tasks performed and time spent. This process continues until as many respondents as possible are included in a group.

The basic group used in the hierarchical clustering process is the *Job*. When two or more jobs have a substantial degree of similarity in tasks performed and time spent on tasks, they are grouped together and identified as a *Cluster*. The structure of the career ladder is then defined in terms of jobs and clusters of jobs.

Overview of Specialty Jobs

Based on the analysis of tasks performed and the amount of time spent performing each task, three jobs were identified within the career ladder. A listing of these jobs is provided below. The stage (STG) number shown beside each title references computer-printed information; the letter "N" stands for the number of personnel in each group.

- I. **GENERAL ORTHOTIC JOB (STG4, N=10)**
- II. **MID-LEVEL ORTHOTIC JOB (STG6, N=6)**
- III. **ORTHOTIC MANAGEMENT JOB (STG8, N=7)**

The jobs account for 23 of the 25 respondents in the survey sample. The remaining two people performed tasks or series of tasks which did not group with any of the defined jobs and reported duty titles of "Manager Division of Surgery" (AF Functional Manager) and "Superintendent Orthotic." The AF Functional Manager reported performing only supervisory management tasks. The Superintendent of Orthotic indicated doing some technical tasks to assist with patient care, but also did not group into any of the three jobs due to the performance of more supervisory management level tasks. Figure 1 illustrates the jobs performed by AFSC 4U0X1 personnel.

AFSC 4U0X1 JOBS

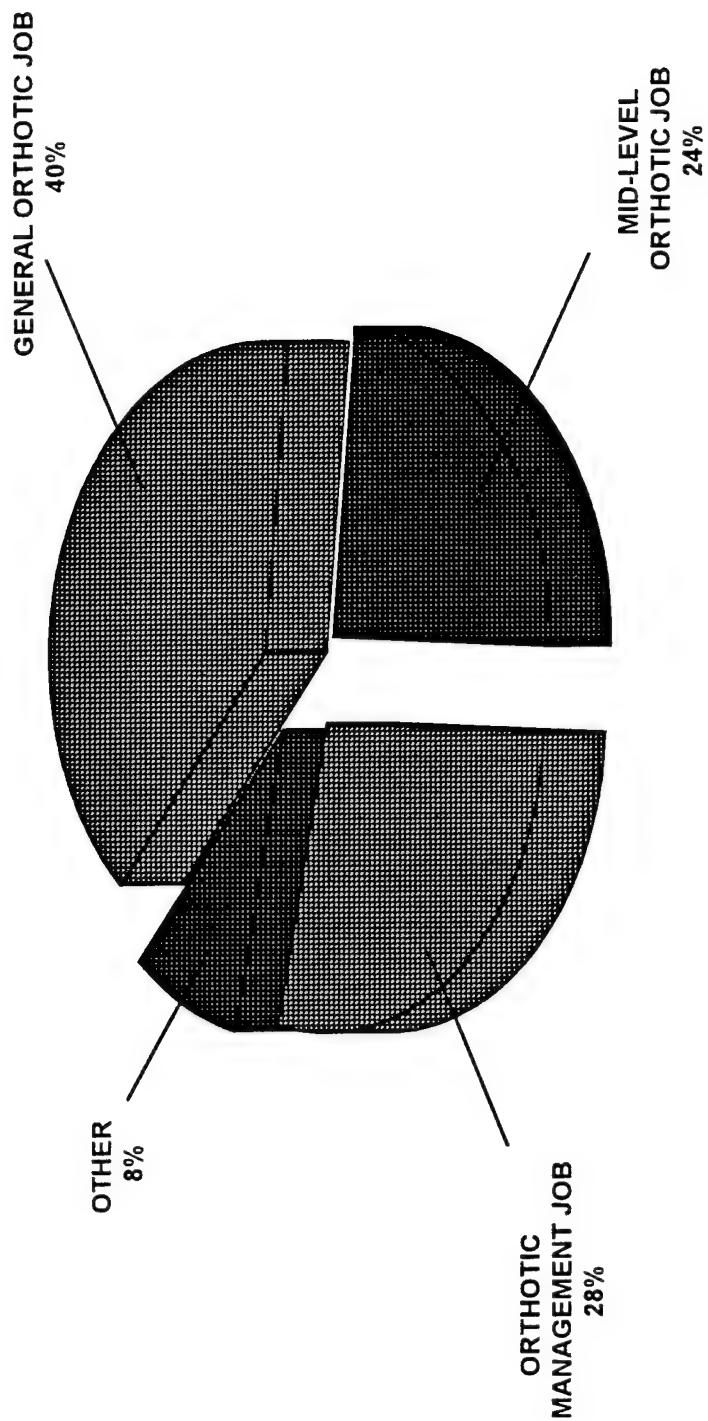


FIGURE 1

Group Descriptions

The following paragraphs contain brief descriptions of the three jobs identified through the career ladder structure analysis. Appendix A lists representative tasks performed by members with each job. Table 3 displays time spent on duties, while Table 4 provides demographic information for each job discussed within this report.

I. **GENERAL ORTHOTIC JOB (STG4, N=10)**. This is the core job of the career ladder. Respondents with this job indicated spending 41 percent of their time performing such general orthotic tasks as making positive or negative molds to create orthoses, mixing powdered plaster of Paris, or maintaining orthotic lab facilities. Incumbents also spend a substantial amount of time performing such basic shoe bench tasks as fabricating arch supports, cutting insoles, or creating accommodative foot insoles. Other representative tasks performed by members with this job include:

- take foam tray foot impressions
- fit molded leather or plastic foot Orthotic
- fabricate molded leather or plastic foot Orthotic
- modify molded leather or plastic foot Orthotic
- fit patients with knee supports without hinges
- vacuum form plastics to positive molds
- cut materials to proper dimensions, such as plastic,
cloth, strap, or metal
- heat plastics in ovens or water
- interpret prescriptions
- cut insoles
- fit patients with hand or wrist splints
- repair or refurbish orthoses
- fit patients with tennis elbow straps

Incumbents tend to be the more junior personnel in the career ladder, averaging 7 years in the service. Members range in paygrade from E-2 to E-5, and most hold either the 3- or 5-skill level.

II. **MID-LEVEL ORTHOTIC JOB (STG6, N=6)**. This job comprises 24 percent of the sample. Incumbents in the Mid-Level Orthotic job perform an average of 172 tasks, 61 more tasks than those with the General Orthotic job. Although respondents with this job perform many of the same tasks as incumbents with the General Orthotic job, their focus is more on tasks requiring a slightly higher level of technical expertise, such as providing patient care for lower extremities and spinal orthotic needs.

TABLE 3
AVERAGE PERCENT TIME SPENT ON DUTIES BY
CAREER LADDER JOBS

DUTIES		GENERAL ORTHOTIC JOB (N=10)	MID-LEVEL ORTHOTIC JOB (N=6)	ORTHOTIC MANAGEMENT JOB (N=7)
A	ORGANIZING AND PLANNING	2	2	6
B	DIRECTING AND IMPLEMENTING	1	1	5
C	INSPECTING AND EVALUATING	1	2	6
D	TRAINING	*	1	4
E	PERFORMING GENERAL ADMINISTRATIVE AND SUPPLY TASKS	6	5	9
F	PERFORMING GENERAL ORTHOTIC TASKS	41	30	26
G	PERFORMING UPPER EXTREMITIES ORTHOTIC TASKS	9	13	11
H	PERFORMING LOWER EXTREMITIES ORTHOTIC TASKS	11	17	10
I	PERFORMING SPINAL ORTHOTIC TASKS	7	14	10
J	PERFORMING SHOE BENCH ORTHOTIC TASKS	22	16	13

* Denotes less than 1 percent

TABLE 4

SELECTED BACKGROUND DATA FOR DAFSC 4U0X1
CAREER LADDER JOBS

	GENERAL ORTHOTIC JOB	MID-LEVEL ORTHOTIC JOB	ORTHOTIC MANAGEMENT JOB
NUMBER IN GROUP	10	6	7
PERCENT OF SAMPLE	40	24	28
<hr/>			
DAFSC DISTRIBUTION			
4U031	30%	33%	0%
4U051	30%	33%	0%
4U071	40%	33%	86%
4U091	0%	0%	0%
CEM	0%	0%	0%
<hr/>			
PAYGRADE DISTRIBUTION			
E-1 to E-3	40%	33%	14%
E-4	20%	33%	0%
E-5	40%	0%	14%
E-6	0%	17%	57%
E-7	0%	17%	14%
E-8	0%	0%	0%
E-9	0%	0%	0%
<hr/>			
AVERAGE NUMBER OF TASKS PERFORMED	111	172	184
AVERAGE MONTHS TAFMS	86	95	182
PERCENT IN FIRST ENLISTMENT	40%	50%	0%
PERCENT SUPERVISING	20%	33%	86%

The following are typical tasks members with the Mid-Level Orthotic job perform:

- vacuum form plastics to positive molds
- fit patients with plastic KAFOs (knee-ankle-foot orthoses)
- fabricate plastic AFOs (ankle-foot orthoses)
- modify plaster of Paris molds
- modify molded leather or plastic foot orthoses
- shape metal parts to positive molds
- fabricate parts for orthoses
- make entries on SFs 600 (Health Record - Chronological Record of Medical Care)
- fit patients with plastic HKAFOs (hip-knee-ankle-foot orthoses)
- fit patients with body jackets

Incumbents hold from the 3- to 7-skill level, they average 8 years in the military service, and they are in paygrades E-2 through E-7. All find their job interesting and will probably reenlist.

III. ORTHOTIC MANAGEMENT JOB (STG8, N=7). Incumbents with this job are more senior personnel who perform an average of 184 tasks. What distinguishes this job from the others is the emphasis on supervisory and management responsibilities rather than technical aspects of the specialty. The following are typical tasks members with this job perform:

- analyze workload requirements
- modify spinal x-rays for Boston Buckets
- determine or scheduling work assignments
- implement work methods
- coordinate maintenance of equipment with appropriate agencies

All but one incumbent hold the 7-skill level, six of the seven are in paygrades E-5 through E-7, and they average 15 years in the service. Many of the respondents in this job reported holding the duty titles of "NCOIC Orthotic Lab." The two respondents who did not group with the others in the sample included the AF Functional Manager and the Superintendent of Orthotic. Unlike other incumbents in the career ladder, the primary responsibilities of these two respondents are mainly administrative.

Comparison of Current Group Descriptions to Previous Study

The results of the specialty job analysis were compared to the previous OSR, dated December 1987. Table 5 lists the major jobs identified in the 1994 report and their equivalent jobs from the 1987 OSR. A review of the jobs performed by the current sample indicates that all of the 1992 jobs were matched to similar jobs identified in the 1987 report.

TABLE 5
SPECIALTY JOB COMPARISONS BETWEEN
CURRENT AND 1987 919X0 SURVEY

<u>CURRENT SURVEY</u>	<u>1987 (919X0) SURVEY</u>
- GENERAL ORTHOTIC JOB	- GENERAL
- MID-LEVEL ORTHOTIC JOB	- SUPERVISORS
- ORTHOTIC MANAGEMENT JOB	- MANAGERS
- OTHER	- OTHER

ANALYSIS OF DAFSC GROUPS

An analysis of DAFSC groups, in conjunction with the analysis of the career ladder structure, is an important part of each occupational survey. The DAFSC analysis identifies differences in tasks performed at the various skill levels. This information may be used to evaluate how well career ladder documents, such as AFMAN 36-2108 Specialty Descriptions, reflect what career ladder personnel are actually doing in the field.

The distribution of skill-level groups across the career ladder jobs is displayed in Table 6, while Table 7 offers another perspective by displaying percent time spent on each duty across the skill-level groups.

AFSC 4U0X1 personnel progress typically through the career ladder, with 3-skill level personnel spending most of their time on technical tasks and higher skill-level personnel performing more difficult technical and managerial tasks. This is shown by data in Table 6. The majority of 3-skill level personnel perform the General Orthotic job, most of the 5-skill level personnel perform the Mid-Level Orthotic job, and most of the 7-skill level perform the Orthotic Management job.

Skill-Level Descriptions

DAFSC 4U031. The 4 airmen in the 3-skill level group perform an average of 108 tasks. They spend approximately 44 percent of their time performing general orthotic tasks, such as fitting patients with stock arch supports, taking foam tray foot impressions, filling negative casts with plaster of Paris, or fitting patients with lumbo-lacral (L-S) supports. They average slightly more than 2 years of active duty military service. Two of the four are in Air Mobility Command, with one in Air Education and Training Command and one in Air Force Material Command. Representative tasks these four respondents performed are listed in Table 8.

DAFSC 4U051. The 9 airmen in the 5-skill level group perform an average of 161 tasks. They spend a substantial amount of time performing general orthotic tasks, such as interpreting prescriptions, measuring patients for prefabricated orthoses, and heating plastics in ovens or water. They spend the remainder of their time performing shoe bench tasks, spinal orthotic tasks, and upper or lower extremities orthotic tasks. This is clearly shown in Table 9, which lists representative tasks performed by members of this group.

Although 5-skill level personnel spend the majority of their job time performing the same technical duties as their junior counterparts, it is the slight shift in job focus toward the performance of technical tasks requiring more experience which distinguishes them from 3-skill level personnel. As is shown in Table 10, more of the 5-skill level members perform such tasks as fitting patients with Boston Overlap Braces (BOBs), evaluating maintenance of equipment, counseling subordinates, and modifying spinal X-rays for BOBs.

TABLE 6
DISTRIBUTION OF SKILL-LEVEL MEMBERS
ACROSS CAREER LADDER JOBS
(PERCENT MEMBERS RESPONDING)

<u>JOBS</u>	<u>4U031 (N=4)</u>	<u>4U051 (N=9)</u>	<u>4U071 (N=11)</u>	<u>4U000 (N=1)</u>
GENERAL ORTHOTIC JOB	75	33	36	*
MID-LEVEL ORTHOTIC JOB	25	44	9	*
ORTHOTIC MANAGEMENT JOB	*	22	46	*
OTHER	*	1	9	100

* Denotes less than 1 percent

TABLE 7
TIME SPENT ON DUTIES BY MEMBERS OF
SKILL-LEVEL GROUPS
(RELATIVE PERCENT OF JOB TIME)

DUTIES		4U031 (N=4)	4U051 (N=9)	4U071 (N=11)	4U000 (N=1)
A	ORGANIZING AND PLANNING	1	3	5	34
B	DIRECTING AND IMPLEMENTING	1	2	4	27
C	INSPECTING AND EVALUATING	*	2	5	31
D	TRAINING	*	2	3	8
E	PERFORMING GENERAL ADMINISTRATION AND SUPPLY TASKS	3	6	9	*
F	PERFORMING GENERAL ORTHOTIC TASKS	44	32	30	*
G	PERFORMING UPPER EXTREMITIES ORTHOTIC TASKS	8	12	10	*
H	PERFORMING LOWER EXTREMITIES ORTHOTIC TASKS	12	14	11	*
I	PERFORMING SPINAL ORTHOTIC TASKS	8	11	9	*
J	PERFORMING SHOE BENCH ORTHOTIC TASKS	44	17	15	*

* Denotes less than 1 percent

TABLE 8
REPRESENTATIVE TASKS PERFORMED BY
DAFSC 4U031 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=4)
J293	100
J299	100
J287	100
J290	100
J296	100
F137	100
F105	100
J284	100
J285	100
F127	100
F110	100
F124	100
F136	100
F125	100
F106	100
F102	100
F103	100
J279	100
F118	100
H219	100
J281	100
F100	100
F126	100
F128	100
F97	100
F99	100
F101	100
F116	100
F114	100
F122	100
F108	100

TABLE 9

REPRESENTATIVE TASKS PERFORMED BY
DAFSC 4U051 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=9)
J290	100
H204	100
F110	100
J286	100
J296	100
F102	100
J291	100
F137	100
J287	100
F115	100
F106	100
J285	100
H219	100
F116	100
J284	100
F136	100
F128	100
F132	100
F107	100
I254	100
F105	100
H218	100
F114	100
F124	100
F113	100
F125	100
G181	100
F122	100
G167	100
J282	100
J293	100
F118	100
F130	100

TABLE 10
TASKS BEST DIFFERENTIATING DAFSC 4U031
AND DAFSC 4U051

TASKS	4U031 (N=4)	4U051 (N=9)	DIFF
H221 FIT PATIENTS WITH METAL HKAFOs	75	44	31
H232 MEASURE PATIENTS FOR KIT PARAPODIUMS	25	0	25
J300 TAKE SLIPPER CAST FOOT IMPRESSIONS	100	78	22
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G184 MODIFY FOREARM PLASTER MOLDS	0	78	-78
E89 MAKE ENTRIES ON DD FORMS 1348-6 (DOD SINGLE LINE ITEM REQUISITION SYSTEM DOCUMENT)	0	78	-78
E80 MAINTAIN ORTHOTIC SUPPLY CATALOGS	0	67	-67
B23 COORDINATE MAINTENANCE OF EQUIPMENT WITH APPROPRIATE AGENCIES	0	67	-67
A8 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	0	67	-67
H229 FIT PATIENTS WITH TIBIAL ORTHOSES	0	67	-67
G160 FIT PATIENTS WITH AIRPLANE SPLINTS	25	89	-64
I251 FIT PATIENTS WITH CHAIR BACK ORTHOSES	25	89	-64
I249 FIT PATIENTS WITH BOSTON OVERLAP BRACES (BOBs)	25	89	-64
E93 MAKE ENTRIES ON SFs 513 (MEDICAL RECORD - CONSULTATION SHEET)	25	89	-64
I269 MODIFY BOBs	25	89	-64
C38 EVALUATE MAINTENANCE OF EQUIPMENT	0	56	-56
E84 MAINTAIN SUPPLY DOCUMENT LISTINGS	0	56	-56
B24 COUNSEL SUBORDINATES	0	56	-56
I275 MODIFY SPINAL X-RAYS FOR BOSTON BUCKETS	0	56	-56
C39 EVALUATE PERSONNEL FOR COMPLIANCE WITH PERFORMANCE STANDARDS	0	56	-56
E87 MAKE ENTRIES ON AF FORMS 601 (EQUIPMENT ACTION REQUEST)	0	56	-56
I270 MODIFY BOSTON BUCKETS	25	78	-53
I260 FIT PATIENTS WITH STERNAL OCCIPITAL MANDIBLE IMMOBILIZERS (SOMIs)	25	78	-53
E91 MAKE ENTRIES ON LOCAL PURCHASE FORMS	25	78	-53

DAFSC 4U071. Seven-skill level personnel also perform an average of 161 tasks. While 75 percent of their relative job time is spent performing general, upper, lower, spinal, and shoe bench orthotic technical tasks, they are distinguished from the 3-skill and 5-skill level personnel by their focus on managerial tasks. Such tasks include maintaining time accountability reports, scheduling leaves, drafting recommendations for changes in equipment, or writing EPRs. Further examples of technical tasks performed by 7-skill level personnel may be found in Table 11. Table 12 illustrates the differences between 5- and 7-skill level personnel. The only technical tasks specific to 7-skill level personnel involved fabricating or fitting Milwaukee braces. SMEs report newer and simpler forms of orthoses have replaced Milwaukee brace, and are not used by newer members of the career ladder.

DAFSC 4U091/CEM. DAFSC 4U091 personnel were not in the sample. A few DAFSC 4U071 personnel indicated they held a primary 9-skill level, and one CEM responded to the survey. According to these respondents, patient care needs and personnel shortages make it difficult for some senior personnel to focus entirely on supervisory and managerial tasks. The one CEM respondent was unique, however, because he performed only supervisory and management tasks. Typical supervisory and management tasks performed include establishing performance standards for subordinates, conducting staff assistance visits, and counseling subordinates. Other representative tasks performed by senior personnel are listed on Table 13. Differences between tasks performed by 7-skill level and CEM personnel are shown on Table 14. Note the most senior respondent performed only supervisory and administrative tasks listed at the bottom of the table.

Summary

Personnel in the Orthotic Specialty demonstrate a typical progression through the career ladder, with 3-skill level personnel spending the vast majority of their job time performing technical tasks. There is a slight shift towards supervisory functions at the 5-skill level, with members still spending more than 86 percent of their duty time performing technical functions. Personnel at the 7-skill level perform more technical tasks than in other career ladders, but still are distinguished by the time spent on tasks requiring more technical expertise and some management responsibilities, as compared to the more junior personnel. Nine-skill and CEM-level personnel are clearly the career ladder managers.

ANALYSIS OF AFMAN 36-2108 SPECIALTY DESCRIPTIONS

Survey data were compared to the AFMAN 36-2108 *Specialty Descriptions* for the Orthotic career ladder, dated 15 March 1991. Descriptions for the skill levels are generally accurate, depicting the highly technical aspects of the job, as well as the increase in supervisory responsibilities previously described in the DAFSC analysis. The descriptions also capture the primary responsibilities of members in the three jobs identified by the job structure analysis.

TABLE 11
REPRESENTATIVE TASKS PERFORMED BY
DAFSC 4U071 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=11)
J290	100
J291	100
F116	100
F137	100
J284	100
J299	100
F115	100
F136	100
F127	100
F114	100
F106	100
F124	100
F126	100
H219	100
F118	100
F110	100
G167	100
H211	100
J296	100
G178	100
H218	100
H223	100
H204	100
F105	100
F103	100
F100	100
F102	100
J282	100
F122	100
F125	100
J292	100
F101	100
F99	100

TABLE 12

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 4U051
AND DAFSC 4U071 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	2R051 (N=9)	2R071 (N=11)	DIFF
J294 INSERT METAL PLATES IN FOOTWEAR	78	27	51
H194 ASSEMBLE KIT PARAPODIUMS	56	9	46
G184 MODIFY FOREARM PLASTER MOLDS	78	36	41
J288 FABRICATE PLASTIC HEEL CUPS	78	36	41
H198 FABRICATE CUSTOM KNEE ORTHOSES	78	36	41
F112 LOAD OR UNLOAD PATIENTS TO OR FROM TRANSPORT VEHICLES	67	27	39
G190 MODIFY WRIST OR HAND PLASTER MOLDS	67	27	39
I276 PERFORM MOLD-A-BRACE TECHNIQUES TO FIT PATIENTS WITH TEMPORARY BODY JACKETS	56	18	37
G166 FIT PATIENTS WITH FOREARM SPLINTS	100	64	36
H216 FIT PATIENTS WITH KIT PARAPODIUMS	44	9	35
I269 MODIFY BOBs	90	55	34
H215 FIT PATIENTS WITH ISCHIAL RINGS	33	0	33
<hr/>			
E85 MAINTAIN TIME ACCOUNTABILITY REPORTS	11	73	-62
A16 SCHEDULE LEAVES	22	73	-51
A3 DETERMINE PUBLICATION REQUIREMENTS	0	45	-45
B21 CONDUCT STAFF MEETINGS	0	45	-45
B26 DRAFT RECOMMENDATIONS FOR CHANGES IN EQUIPMENT	11	54	-43
B20 CONDUCT BRIEFINGS	11	54	-43
B33 INTERPRET POLICIES FOR SUBORDINATES	11	54	-43
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	11	54	-43
A5 DEVELOP SELF-INSPECTION PROGRAMS	22	63	-41
C52 WRITE EPRs	33	72	-39
I255 FIT PATIENTS WITH MILWAUKEE ORTHOSES	0	36	-36
I240 FABRICATE MILWAUKEE ORTHOSES	0	27	-27
D55 CONDUCT TRAINING BRIEFINGS	11	36	-25

TABLE 13

REPRESENTATIVE TASKS PERFORMED BY
DAFSC 4U000 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=1)
C49 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	100
B30 IMPLEMENT SELF-INSPECTION PROGRAMS	100
A11 PLAN BRIEFINGS	100
B20 CONDUCT BRIEFINGS	100
B21 CONDUCT STAFF MEETINGS	100
C48 INSPECT APPEARANCE OF FACILITIES	100
C43 EVALUATE SAFETY PROGRAMS	100
A13 PLAN SAFETY PROGRAMS	100
B29 IMPLEMENT SAFETY PROGRAMS	100
A14 PLAN WORK ASSIGNMENTS	100
C36 EVALUATE BUDGET REQUIREMENTS	100
A8 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	100
A7 DRAFT BUDGET REQUIREMENTS	100
A15 SCHEDULE FACILITIES OR EQUIPMENT INSPECTIONS	100
A5 DEVELOP SELF-INSPECTIONS PROGRAMS	100
C35 CONDUCT STAFF ASSISTANCE VISITS	100
B31 IMPLEMENT WORK METHODS	100
B19 COMPILE DATA FOR REPORTS FOR STAFF STUDIES	100
C34 ANALYZE WORKLOAD REQUIREMENTS	100
B33 INTERPRET POLICIES FOR SUBORDINATES	100
C45 EVALUATE WORK SCHEDULES	100
C39 EVALUATE PERSONNEL FOR COMPLIANCE WITH PERFORMANCE STANDARDS	100
A10 ESTABLISH WORK SCHEDULES	100
A2 DETERMINE OR SCHEDULE WORK PRIORITIES	100
B24 COUNSEL SUBORDINATES	100
A6 DEVELOP WORK METHODS	100
A16 SCHEDULE LEAVES	100
C42 EVALUATE QUALITY CONTROL PROCEDURES	100
C40 EVALUATE PERSONNEL FOR DEMOTIONS, PROMOTIONS, OR RECLASSIFICATIONS	100
B22 CONDUCT SUPERVISORY ORIENTATIONS OF NEWLY ASSIGNED PERSONNEL	100
A9 ESTABLISH PRODUCTION CONTROLS	100

TABLE 14

TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 4U071 AND DAFSC 4U000 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		4U071 (N=11)	4U000 (N=1)	DIFF
F129	REQUISITION CUSTOM-MADE ORTHOSES	100	0	100
F130	RIVET OR SCREW METALS TO PLASTICS	100	0	100
F131	SAND AND POLISH METALS	100	0	100
F132	SELECT MATERIALS FOR CONSTRUCTION OF ORTHOTIC DEVICES	100	0	100
F133	SET OVEN TEMPERATURES	100	0	100
F134	SHAPE METAL PARTS TO POSITIVE MOLDS	100	0	100
F135	TRACE EXTREMITIES	100	0	100
J298	STRETCH FOOTWEAR	100	0	100
H204	FABRICATE PLASTIC AFOs	100	0	100
F128	REPAIR OR REFURBISH ORTHOSES	100	0	100
<hr/>				
C35	CONDUCT STAFF ASSISTANCE VISITS	9	100	-91
A12	PLAN LAYOUTS OF FACILITIES	27	100	-73
A18	WRITE JOB DESCRIPTIONS	27	100	-73
D65	EVALUATE PROGRESS OF TRAINEES	27	100	-73
D54	ASSIGN ON-THE-JOB TRAINING (OJT) TRAINERS OR RESIDENT COURSE INSTRUCTORS	27	100	-73
A17	SCHEDULE PERSONNEL FOR TEMPORARY DUTY (TDY) ASSIGNMENTS	27	100	-73
C50	INVESTIGATE ACCIDENTS OR INCIDENTS	27	100	-73
A15	SCHEDULE FACILITIES OR EQUIPMENT INSPECTIONS	36	100	-64
D68	MAKE ENTRIES IN TRAINING RECORDS	36	100	-64
D59	DETERMINE OR ESTABLISH TRAINING REQUIREMENTS	36	100	-64
C42	EVALUATE QUALITY CONTROL PROCEDURES	36	100	-64
C37	EVALUATE JOB DESCRIPTIONS	36	100	-64

TRAINING ANALYSIS

Sources of information, which can be used to assist in the development of relevant training programs for entry-level personnel are occupational survey data. Factors used to evaluate entry-level Orthotic training include jobs performed by first-enlistment personnel, overall distribution of first-enlistment personnel across career ladder jobs, percent first-job (1-24 months TAFMS) and first-enlistment (1-48 months TAFMS) members performing specific tasks, ratings of how much TE tasks should receive in formal training, and ratings of relative TD.

First-Enlistment Personnel

Seven AFSC 4U0X1 respondents were in their first enlistment (1-48 months TAFMS). Three perform shoe bench tasks of the General Orthotic job, and three perform tasks related to the Mid-Level Orthotic job. The seventh performed such a variety of tasks he could not be grouped with the other jobs. Table 15 shows typical tasks performed by first-enlistment personnel, which include both shoe bench and more advanced measurement tasks.

TE and TD Data

TE and TD data are secondary task factors that can help training development personnel decide which tasks to emphasize for entry-level training. These ratings, based on the judgments of senior career ladder NCOs at operational units, provide a rank ordering of those tasks considered important for first-enlistment airman training (TE) and a measure of the relative difficulty of those tasks (TD). When combined with data on the percentages of first-enlistment personnel performing tasks, comparisons can be made to determine if training adjustments are necessary. For example, tasks receiving high ratings on both task factors (TE and TD), accompanied by moderate to high percentages performing, may warrant resident training. Those tasks receiving high task factor ratings, but low percentages performing, may be more appropriately planned for OJT programs within the career ladder. Low task factor ratings may highlight tasks best omitted from training for first-enlistment personnel. These decisions must be weighed against percentages of personnel performing the tasks, command concerns, and criticality of the tasks.

To assist training development personnel, AFOMS developed a computer program that uses these task factors and the percentage of first-enlistment personnel performing tasks to produce Automated Training Indicators (ATI). ATI correspond to training decisions listed and defined in the Training Decision Logic Table found in **Attachment 1, AETCR 52-22**. ATI allows training developers to quickly focus attention on those tasks which are most likely to qualify for ABR course consideration.

TABLE 15

REPRESENTATIVE TASKS PERFORMED BY
FIRST-ENLISTMENT PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING 4U0X1 (N=7)
J287	FABRICATE MOLDED LEATHER OR PLASTIC FOOT ORTHOTIC	100
J290	FIT MOLDED LEATHER OR PLASTIC FOOT ORTHOTIC	100
J296	MODIFY MOLDED LEATHER OR PLASTIC FOOT ORTHOTIC	100
J293	FIT PATIENTS WITH STOCK ARCH SUPPORTS	100
F137	VACUUM FORM PLASTICS TO POSITIVE MOLDS	100
F105	FILL NEGATIVE CASTS WITH PLASTER OF PARIS	100
F127	REMOVE PLASTIC ORTHOSES FROM POSITIVE MOLDS	100
F110	INTERPRET PRESCRIPTIONS	100
F124	PREPARE POSITIVE MOLDS FOR PLASTIC ORTHOSES	100
F136	TRIM ORTHOSES	100
F125	REMOVE NEGATIVE CASTS FROM PLASTER OF PARIS MOLDS	100
F106	HEAT PLASTICS IN OVENS OR WATER	100
F102	CUT MATERIALS TO PROPER DIMENSIONS, SUCH AS PLASTIC, CLOTH, STRAP, OR METAL	100
F103	FABRICATE NEGATIVE MOLDS BY CASTING PATIENTS WITH PLASTER BANDAGES	100
F118	MODIFY PLASTER OF PARIS MOLDS	100
J285	FABRICATE ACCOMMODATIVE FOOT INSOLES	100
F100	CLOSE AND SEAL NEGATIVE CASTS	100
F99	CLEAN PLASTICS	100
F128	REPAIR OR REFURBISH ORTHOSES	100
F97	APPLY SEPARATING AGENTS TO NEGATIVE CASTS	100
F126	REMOVE PLASTER CASTS FROM PATIENTS	100
F101	COVER POSITIVE MOLDS WITH NYLON HOSE OR STOCKINETTE	100
F116	MIX POWDERED PLASTER OF PARIS	100
H219	FIT PATIENTS WITH KNEE SUPPORTS WITHOUT HINGES	100
J281	ATTACH SOLES TO FOOTWEAR, SUCH AS CREPE, CORK, OR LEATHER	100
F114	MEASURE PATIENTS FOR CUSTOM-MADE ORTHOSES	100
J279	ATTACH METATARSAL BARS OR PADS TO FOOTWEAR	100
F122	PREPARE AND POSITION PATIENTS TO BE CASTED	100
F108	IDENTIFY BONY PROMINENCES OR LANDMARKS ON PATIENTS	100
F113	MAINTAIN ORTHOTIC LAB FACILITIES	100

Tasks having the highest TE ratings are listed in Table 16. Included for each task are the percentage of first-job and first-enlistment personnel performing and the TD rating. As illustrated in Table 16, tasks with the highest TE ratings deal with general orthotic tasks, such as fabricating negative molds by casting patients with plaster bandages, identifying bony prominences or landmarks on patients, or modifying tracing to dimensions. Table 17 lists the tasks having the highest TD ratings. The percentage of first-enlistment, first-job, 5-, and 7-skill level personnel performing, and TE rating are also included for each task. Most tasks with high TD ratings involve lower extremity or spinal tasks, such as fabricating metal Hip-Knee-Ankle-Foot Orthoses (HKAFOs), fabricating body jackets, or fitting patients with reciprocating gait orthoses.

Various lists of tasks, accompanied by TE and TD ratings, are contained in the TRAINING EXTRACT package and should be reviewed in detail by technical school personnel. For a more detailed explanation of TE and TD ratings, see Task Factor Administration in the SURVEY METHODOLOGY section of this report.

Specialty Training Standard (STS)

At the time of the survey, the Orthotic career ladder did not have an STS, but relied on Course Training Standards (CTSs) and Job Qualification Standards (JQSs). On 20-25 June 1994, the AF Functional Manager for Orthotic held a Utilization and Training Workshop (U&TW), with technical school personnel and MAJCOM representatives. At the U&TW they developed a draft STS as part of their Career Field Education and Training Plan (CFETP) mandated by the Year of Training Initiatives. The draft CFETP did not include 5- or 7-skill level CDCs at the conclusion of the U&TW, and did not include provisions for a Specialty Knowledge Test (SKT) as part of the Weighted Airman Promotion System (WAPS) testing program.

Plan of Instruction (POI)

JI tasks were matched to related learning objectives in POI J5ABO 91930-000, dated 6 September 1989, with assistance from the AF Career Field Manager and the Superintendent of Orthotic at the technical school. The data examined included percent members performing data for first-enlistment (1-48 months' TAFMS) personnel and TE and TD ratings. ATI ratings for each task were also used.

POI blocks, units of instruction, and learning objectives were compared to the standards set forth in AFI 36-2623 (30 percent or more of the criterion first-job or first-enlistment group members performing tasks, along with sufficiently high TE and TD ratings on those tasks). By this guidance, learning objectives in the course which do not meet these criteria should be considered for elimination from the formal course, if not justified on some other acceptable basis.

A review of the tasks matched to the POI reveals that all matched learning objectives were supported by OSR data. There are, however, some technical tasks performed by over 30 percent of first-enlistment personnel that were not matched to the POI. These tasks, listed in Table 18,

TABLE 16

EXAMPLES OF 4U0X1 TASKS WITH HIGHEST TE RATINGS

TASKS	TNG EMP	PERCENT MEMBERS PERFORMING			TASK DIFF
		MEMBERS PERFORMING		TASK DIFF	
		IST JOB	ENL		
F103		FABRICATE NEGATIVE MOLDS BY CASTING PATIENTS WITH PLASTER BANDAGES			
F108	9.00	100	100	5.04	
F137	9.00	100	100	4.06	
H206	8.75	100	100	4.06	
H204	8.50	75	86	6.60	
J287	8.50	75	86	5.70	
F119	8.25	100	100	5.25	
J286	8.25	100	100	5.33	
H223	8.25	75	86	5.52	
F135	8.25	75	86	4.94	
J290	8.25	75	86	5.02	
I272	8.00	100	100	4.83	
H225	8.00	75	71	6.09	
F122	8.00	75	86	6.17	
F124	8.00	100	100	4.84	
I247	8.00	100	100	5.11	
F134	8.00	75	86	5.57	
J300	8.00	75	86	5.75	
F118	8.00	100	86	5.49	
H201	8.00	100	100	5.54	
H203	7.75	100	86	5.45	
J295	7.75	75	71	7.21	
	7.75	50	71	4.43	

TE MEAN = 3.94 S.D. = 2.90 (High = 6.84)

TD MEAN = 5.00 S.D. = 1.00

TABLE 16 (CONTINUED)

EXAMPLES OF 4U0X1 TASKS WITH HIGHEST TE RATINGS

TASKS	TNG EMP	PERCENT MEMBERS PERFORMING			TASK DIFF
		1ST JOB	1ST ENL		
F136	7.75	100	100	4.67	
F114	7.75	100	100	5.15	
J278	7.75	100	86	5.45	
I237	7.50	75	86	7.03	
I253	7.50	50	57	5.29	
I249	7.50	50	43	6.29	
I248	7.50	50	57	7.09	
F105	7.50	100	100	2.76	
I264	7.50	50	57	5.31	
F115	7.50	100	100	4.08	
F106	7.50	100	100	3.57	
I251	7.50	50	57	4.75	
F100	7.50	100	100	2.05	
F130	7.50	100	100	2.05	
F130	7.50	100	100	4.07	
H220	7.50	75	71	4.94	
H222	7.50	75	71	6.03	
F102					
	7.50	100	100	3.85	
H205	7.25	75	71	6.03	
F93	7.25	50	43	3.90	

TE MEAN = 3.94 S.D. = 2.90 (High = 6.84)

TD MEAN = 5.00 S.D. = 1.00

TABLE 17

EXAMPLES OF 4U0X1 TASKS WITH HIGHEST TD RATINGS

TASKS	TASK DIFF	PERCENT MEMBERS PERFORMING					TNG EMP
		1ST		4U051	4U071		
		JOB	ENL				
H208	8.06	25	29	22	9	3.00	
H202	7.49	50	57	44	55	7.00	
H228	7.31	25	29	22	9	1.00	
H203	7.21	75	71	67	73	7.75	
I237	7.03	75	86	89	73	7.50	
H209	6.88	50	43	78	55	7.25	
H205	6.87	75	57	44	55	7.25	
I239	6.64	50	57	44	36	7.00	
H206	6.60	75	86	89	91	8.50	
I270	6.56	25	43	78	73	7.25	
H195	6.35	50	43	44	18	3.50	
I238	6.30	50	57	44	55	7.00	
I249	6.29	50	43	89	64	7.50	
H224	6.27	75	57	56	55	7.25	
H221	6.27	75	71	44	55	6.50	
H225	6.17	75	86	89	91	8.00	
G157	6.17	25	14	11	9	3.50	
I260							
(SOMIs)							
J300	6.13	50	43	78	45	6.75	
H201	5.49	100	86	78	73	8.00	
J278	5.45	100	86	89	91	7.75	
J282	5.45	100	86	89	82	7.75	
G185	5.43	75	86	100	100	7.25	
J294	5.43	25	29	56	45	3.00	
G152	5.39	75	57	78	27	4.00	
F119	5.33	50	29	22	18	6.25	
	5.33	100	100	100	100	8.25	

TD MEAN = 5.00 S.D. = 1.00

TE MEAN = 3.94 S.D. = 2.90 (HIGH = 6.84)

TABLE 18

EXAMPLES OF TECHNICAL TASKS PERFORMED BY 30 PERCENT OR MORE
DAFSC 4U0XI GROUP MEMBERS AND NOT REFERENCED TO THE POI

TASKS	TNG EMP	ATI	1ST ENL (N=7)	1ST JOB (N=4)	TASK DIFF
E86 MAKE ENTRIES ON AF FORMS 555 (PATIENT VISIT REGISTER)	5.75	3	50	29	3.98
E93 MAKE ENTRIES ON SFs 513 (MEDICAL RECORD - CONSULTATION SHEET)	7.25	10	50	43	3.90
E94 MAKE ENTRIES ON SFs 600 (HEALTH RECORD - CHRONOLOGICAL RECORD OF MEDICAL CARE)	7.25	13	75	57	3.90
F110 INTERPRET PRESCRIPTIONS	7.25	18	100	100	4.97
F117 MODIFY CANES OR CRUTCHES	4.50	17	50	57	4.49
F128 REPAIR OR REFURBISH ORTHOSES	6.00	17	100	100	4.67
F129 REQUISITION CUSTOM-MADE ORTHOSES	5.25	17	75	71	4.34
G160 FIT PATIENTS WITH AIRPLANE SPLINTS	5.25	17	50	57	5.18
G181 FIT PATIENTS WITH WRIST SPLINTS OR GAUNTLETS	6.00	17	100	86	4.08
H193 ASSEMBLE HIP ABDUCTION ORTHOSES	5.50	15	50	43	5.28
H198 FABRICATE CUSTOM KNEE ORTHOSES	4.75	17	75	71	6.02
H202 FABRICATE METAL HIP-KNEE-ANKLE-FOOT ORTHOSES (HKAFOs)	7.00	18	50	57	7.49
H205 FABRICATE PLASTIC HKAFOs	7.25	18	75	57	6.87
H221 FIT PATIENTS WITH METAL HKAFOs	6.50	17	75	71	6.27
H224 FIT PATIENTS WITH PLASTIC HKAFOs	7.25	18	75	57	6.27
I241 FABRICATE POSTERIOR SHELLS	5.25	17	75	57	6.10
I242 FABRICATE RIB BELTS	5.50	15	50	43	4.79
I248 FIT PATIENTS WITH BOSTON BUCKETS	7.50	18	50	57	7.09
I249 FIT PATIENTS WITH BOSTON OVERLAP BRACES (BOBs)	7.50	12	50	43	6.29
I260 FIT PATIENTS WITH STERNAL OCCIPITAL MANDIBLE IMMOBILIZERS (SOMIs)	6.75	15	50	43	6.13
I264 MEASURE PATIENTS FOR BOSTON BUCKETS	7.50	18	50	57	5.31
I269 MODIFY BOBs	6.25	15	50	43	5.83
I270 MODIFY BOSTON BUCKETS	7.25	12	25	43	6.56
I273 MODIFY PLASTER MOLDS FOR POSTERIOR SHELLS	6.00	17	75	57	5.99
J283 CAST PATIENTS FOR CUSTOM FOOTWEAR	6.75	17	100	86	4.65
J295 MEASURE PATIENTS FOR CUSTOM FOOTWEAR	7.75	18	50	71	4.43

TE MEAN = 3.94 S.D. = 2.90 (High = 6.84)

TD MEAN = 5.00 S.D. = 1.00

TABLE 18 (CONTINUED)

EXAMPLES OF TECHNICAL TASKS PERFORMED BY 30 PERCENT OR MORE
DAFSC 4U0X1 GROUP MEMBERS AND NOT REFERENCED TO THE POI

TASKS	TNG		ATI	1ST ENL (N=7)	1ST JOB (N=4)	TASK DIFF
	EMP					
H221	6.50		17	75	71	6.27
H224	7.25		18	75	57	6.27
I241	5.25		17	75	57	6.10
I242	5.50		15	50	43	4.79
I248	7.50		18	50	57	7.09
I249	7.50		12	50	43	6.29
I260						
(SOMIs)						
I264	6.75		15	50	43	6.13
I269	7.50		18	50	57	5.31
I270	6.25		15	50	43	5.83
I273	7.25		12	25	43	6.56
J283	6.00		17	75	57	5.99
J295	6.75		17	100	86	4.65
	7.75		18	50	71	4.43

TE MEAN = 3.94 S.D. = 2.90 (High = 6.84)

TD MEAN = 5.00 S.D. = 1.00

included such things as making entries on AF Forms 555, SFs 513, and SFs 600; modifying canes or crutches; and fitting patients with airplane splints. In addition to many members performing these functions, several of these tasks have high TE and TD. Training personnel and SMEs should review these and other unreferenced tasks to determine if training should be provided in the formal course.

JOB SATISFACTION ANALYSIS

An examination of job satisfaction indicators can give career ladder managers a better understanding of factors that may affect the job performance of career ladder airmen. Therefore, the survey booklet included questions about job interest, perceived utilization of talents and training, sense of accomplishment from work, and reenlistment intentions. The responses of the current survey sample were then analyzed by making several comparisons: (1) among TAFMS groups and a comparative sample of respondents from other Medical career fields recently surveyed, (2) between current and previous survey TAFMS groups, and (3) across those clusters and jobs identified in the **SPECIALTY JOBS** section of this report.

Table 19 compares first-enlistment (1-48 months TAFMS), second-enlistment (49-96 months TAFMS), and career (97+ months TAFMS) group data to corresponding enlistment groups from other Medical AFSCs surveyed during the previous calendar year. These data give a relative measure of how the job satisfaction of AFSC 4U0X1 personnel compares with similar Air Force specialties. Orthotic personnel reported generally higher job satisfaction than members of the comparative sample. Reenlistment intentions, however, for the 49-96 months TAFMS group were slightly less positive than the comparative sample. An indication of changes in job satisfaction perceptions within the career ladder is provided in Table 20, which presents TAFMS group data for 1994 survey respondents and data from respondents to the last OSR of the career ladder in 1987 (AFSC 919X0). Generally, perceptions of job satisfaction have remained constant, except in the areas of reenlistment intentions, for all TAFMS groups when compared to the AFSC 4U0X1 sample.

Table 21 presents job satisfaction data for members with the major jobs identified in the career ladder structure for AFSC 4U0X1. An examination of these data may reveal indications of concern to functional managers. Job satisfaction indicators for the specialty job groups suggest that members of the Orthotic Management job are most satisfied. Members in the Mid-Level Orthotic job have the most positive reenlistment intentions, while members in the General Orthotic job have the least positive.

TABLE 19

COMPARISON OF JOB SATISFACTION INDICATORS FOR TAFMS GROUPS IN
CURRENT SURVEY TO A COMPARATIVE SAMPLE
(PERCENT MEMBERS RESPONDING)

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS	
	COMP* SAMPLE (N=341)		4U0X1 (N=2)		COMP* SAMPLE (N=231)	
	4U0X1 (N=7)				4U0X1 (N=16)	COMP* SAMPLE (N=387)
<u>EXPRESSED JOB INTEREST:</u>						
INTERESTING	100	78	100	81	94	78
SO-SO	0	12	0	14	0	13
DULL	0	10	0	5	6	9
<u>PERCEIVED USE OF TALENTS:</u>						
FAIRLY WELL TO PERFECT	100	83	100	83	88	86
NONE TO VERY LITTLE	0	17	0	17	13	14
<u>PERCEIVED USE OF TRAINING:</u>						
FAIRLY WELL TO PERFECT	100	89	100	90	88	90
NONE TO VERY LITTLE	0	11	0	10	13	10
<u>SENSE OF ACCOMPLISHMENT FROM JOB:</u>						
SATISFIED	100	72	100	72	88	73
NEUTRAL	0	9	0	12	0	10
DISSATISFIED	0	19	0	16	13	17
<u>REENLISTMENT INTENTIONS:</u>						
YES OR PROBABLY YES	57	52	50	67	81	78
NO OR PROBABLY NO	43	48	50	32	0	8
WILL RETIRE	0	0	0	1	19	14

* Comparative sample includes medical personnel surveyed in 1993 (AFSC s 4J0X1 and 4P0X1)

TABLE 20

COMPARISON OF JOB SATISFACTION INDICATORS FOR TOTAL
TAFMS GROUPS IN CURRENT SURVEY TO 1987 SURVEY
(PERCENT MEMBERS RESPONDING)

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS	
	1994 (N=7)	1987 (N=13)	1994 (N=2)	1987 (N=13)	1994 (N=16)	1987 (N=17)
<u>EXPRESSED JOB INTEREST</u>						
INTERESTING	100	69	100	100	94	88
SO-SO	0	8	0	0	0	12
DULL	0	15	0	0	6	0
<u>PERCEIVED USE OF TALENTS</u>						
FAIRLY WELL TO PERFECT	100	77	100	100	88	94
NONE TO VERY LITTLE	0	15	0	0	13	6
<u>PERCEIVED USE OF TRAINING</u>						
FAIRLY WELL TO PERFECT	100	77	100	100	88	82
NONE TO VERY LITTLE	0	23	0	0	13	18
<u>SENSE OF ACCOMPLISHMENT FROM JOB</u>						
SATISFIED	100	*	100	*	88	*
NEUTRAL	0	*	0	*	0	*
DISSATISFIED	0	*	0	*	13	*
<u>REENLISTMENT INTENTIONS</u>						
YES OR PROBABLY YES	57	77	50	100	81	71
NO OR PROBABLY NO	43	23	50	0	0	12
WILL RETIRE	0	0	0	0	19	12

* Data not reported in last survey

TABLE 21

**JOB SATISFACTION INDICATORS FOR DAFSC AFSC 4U0X1 JOBS
(PERCENT MEMBERS RESPONDING)**

	GENERAL ORTHOTIC JOB (N=10)	MID-LEVEL ORTHOTIC JOB (N=6)	ORTHOTIC MANAGEMENT JOB (N=7)
<u>EXPRESSED JOB INTEREST:</u>			
INTERESTING	90%	100%	100%
SO-SO	0%	0%	0%
DULL	10%	0%	0%
<u>PERCEIVED USE OF TALENTS:</u>			
FAIRLY WELL TO PERFECT	90%	83%	100%
NONE TO VERY LITTLE	10%	17%	0%
<u>PERCEIVED USE OF TRAINING:</u>			
FAIRLY WELL TO PERFECT	90%	84%	100%
NONE TO VERY LITTLE	10%	17%	0%
<u>SENSE OF ACCOMPLISHMENT FROM JOB:</u>			
SATISFIED	90%	83%	100%
NEUTRAL	0%	0%	0%
DISSATISFIED	10%	17%	0%
<u>REENLISTMENT INTENTIONS:</u>			
YES OR PROBABLY YES	50%	100%	71%
NO OR PROBABLY NO	40%	0%	0%
WILL RETIRE	10%	0%	29%

IMPLICATIONS

As explained in the **INTRODUCTION**, this survey was conducted primarily to provide training personnel with current information on the Orthotic career ladder for use in reviewing current training programs and training documents. Data compiled from this survey support the current structure of the AFSC 4U0X1 career ladder. The present classification structure, as described by the AFMAN 36-2108 Specialty Descriptions, accurately portrays the jobs in this study.

Analysis of career ladder documents indicates the POI is well supported by OSR data. There are, however, some tasks not matched to the POI that should be reviewed to determine if their inclusion in future revisions of the POI is warranted.

No serious job satisfaction problems appear to exist within this specialty. Overall, job satisfaction responses were almost all higher than those of a comparative sample of similar Air Force personnel surveyed in 1993.

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APPENDIX A

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TABLE A1

GENERAL ORTHOTIC JOB

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
J299 TAKE FOAM TRAY FOOT IMPRESSIONS	100
J290 FIT MOLDED LEATHER OR PLASTIC FOOT ORTHOTIC	100
J287 FABRICATE MOLDED LEATHER OR PLASTIC FOOT ORTHOTIC	100
J296 MODIFY MOLDED LEATHER OR PLASTIC FOOT ORTHOTIC	100
F113 MAINTAIN ORTHOTIC LAB FACILITIES	100
F116 MIX POWDERED PLASTER OF PARIS	100
H219 FIT PATIENTS WITH KNEE SUPPORTS WITHOUT HINGES	100
F137 VACUUM FORM PLASTICS TO POSITIVE MOLDS	100
F102 CUT MATERIALS TO PROPER DIMENSIONS, SUCH AS PLASTIC CLOTH, STRAP, OR METAL	100
F106 HEAT PLASTICS IN OVENS OR WATER	100
F110 INTERPRET PRESCRIPTIONS	100
J284 CUT INSOLES	100
F115 MEASURE PATIENTS FOR PREFABRICATED ORTHOSES	100
J293 FIT PATIENTS WITH STOCK ARCH SUPPORTS	100
F136 TRIM ORTHOSES	100
J285 FABRICATE ACCOMMODATIVE FOOT INSOLES	100
F105 FILL NEGATIVE CASTS WITH PLASTER OF PARIS	100
G167 PREPARE POSITIVE MOLDS FOR PLASTIC ORHTOSES	100
F124 PREPARE POSITIVE MOLDS FOR PLASTIC ORHTOSES	100
F128 REPAIR OR REFURBISH ORTHOSES	100
G178 FIT PATIENTS WITH TENNIS ELBOW STRAPS	100
F114 MEASURE PATIENTS FOR CUSTOM-MADE ORHTOSES	100
F127 REMOVE PLASTIC ORTHOSES FROM POSITIVE MOLDS	100
F125 REMOVE NEGATIVE CASTS FROM PLASTER OF PARIS MOLDS	100
F118 MODIFY PLASTER OF PARIS MOLDS	100
H211 FIT PATIENTS WITH ANKLE ORTHOSES	100
F126 REMOVE PLASTER CASTS FROM PATIENTS	100
F103 FABRICATE NEGATIVE MOLDS BY CASTING PATIENTS WITH PLASTER BANDAGES	100
F107 HEAT PLASTICS USING HEAT GUNS	100
F100 CLOSE AND SEAL NEGATIVE CASTS	100
F101 COVER POSITIVE MOLDS WITH NYLON HOSE OR STOCKINETTE	100
H218 FIT PATIENTS WITH KNEE SUPPORTS WITH METAL HINGES	100
F122 PREPARE AND POSITION PATIENTS TO BE CASTED	100

TABLE A2

MID-LEVEL ORTHOTIC JOB

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
F137 VACUUM FORM PLASTICS TO POSITIVE MOLDS	100
H225 FIT PATIENTS WITH PLASTIC KAFOs	100
F136 TRIM ORTHOSES	100
F125 REMOVE NEGATIVE CASTS FROM PLASTER OF PARIS MOLDS	100
J286 FABRICATE EXTRINSIC OR INTRINSIC POSTED FOOT ORTHOTIC	100
J290 FIT MOLDED LEATHER OR PLASTIC FOOT ORTHOTIC	100
H223 FIT PATIENTS WITH PLASTIC AFOs	100
H204 FABRICATE PLASTIC AFOs	100
F103 FABRICATE NEGATIVE MOLDS BY CASTING PATIENTS WITH PLASTER BANDAGES	100
F115 MEASURE PATIENTS FOR PREFABRICATED ORTHOSES	100
J285 FABRICATE ACCOMMODATIVE FOOT INSOLES	100
J284 CUT INSOLES	100
J291 FIT PATIENTS WITH ACCOMMODATIVE FOOT INSOLES	100
H206 FABRICATE PLASTIC KAFOs	100
F106 HEAT PLASTICS IN OVENS OR WATER	100
F118 MODIFY TRACING TO DIMENSIONS	100
F114 MEASURE PATIENTS FOR CUSTOM-MADE ORTHOSES	100
J282 BUILD-UP FOOTWEAR	100
F129 REQUISITION CUSTOM-MADE ORTHOSES	100
F119 MODIFY TRACING TO DIMENSIONS	100
F127 REMOVE PLASTIC ORTHOSES FROM POSITIVE MOLDS	100
F110 INTERPRET PRESCRIPTIONS	100
F116 MIX POWDERED PLASTER OF PARIS	100
J296 MODIFY MOLDED LEATHER OR PLASTIC FOOT ORTHOTIC	100
F124 PREPARE POSITIVE MOLDS FOR PLASTIC ORTHOSES	100
F98 ATTACH FASTENERS TO PLASTIC ORTHOSES	100
F102 CUT MATERIALS TO PROPER DIMENSIONS, SUCH AS PLASTIC, CLOTH, STRAP, OR METAL	100
F126 REMOVE PLASTER CASTS FROM PATIENTS	100
J281 ATTACH SOLES TO FOOTWEAR, SUCH AS CREPE, CORK, OR LEATHER	100
H218 FIT PATIENTS WITH KNEE SUPPORTS WITH METAL HINGES	100
H219 FIT PATIENTS WITH KNEE SUPPORTS WITHOUT HINGES	100

TABLE A3

ORTHOTIC MANAGEMENT JOB

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

TASKS	PERCENT MEMBERS PERFORMING
J290 FIT MOLDED LEATHER OR PLASTIC FOOT ORTHOTIC	100
F122 PREPARE AND POSITION PATIENTS TO BE CASTED	100
F113 MAINTAIN ORTHOTIC LAB FACILITIES	100
J284 CUT INSOLES	100
G167 FIT PATIENTS WITH HAND OR WRIST SPLINTS	100
G178 FIT PATIENTS WITH TENNIS ELBOW STRAPS	100
F110 INTERPRET PRESCRIPTIONS	100
J292 FIT PATIENTS WITH HEEL CUPS	100
F137 VACUUM FORM PLASTICS TO POSITIVE MOLDS	100
H204 FABRICATE PLASTIC AFOs	100
J285 FABRICATE ACCOMMODATIVE FOOD INSOLES	100
J282 BUILD-UP FOOTWEAR	100
F132 SELECT MATERIALS FOR CONSTRUCTION OF ORTHOTIC DEVICES	100
E75 INVENTORY EQUIPMENT OR SUPPLIES	100
F115 MEASURE PATIENTS FOR PREFABRICATED ORTHOSES	100
F99 CLEAN PLASTICS	100
F97 APPLY SEPARATING AGENTS TO NEGATIVE CASTS	100
F114 MEASURE PATIENTS FOR CUSTOM-MADE ORTHOSES	100
F106 HEAT PLASTICS IN OVENS OR WATER	100
F133 SET OVEN TEMPERATURES	100
J279 ATTACH METATARSAL BARS OR PADS TO FOOTWEAR	100
F129 REQUISITION CUSTOM-MADE ORTHOSES	100
F134 SHAPE METAL PARTS TO POSITIVE MOLDS	100
E90 MAKE ENTRIES ON DD FORMS 150 (SPECIAL MEASUREMENTS BLANK FOR SPECIAL MEASUREMENT/ORTHOPEDIC BOOTS AND SHOES)	100
I247 FIT PATIENTS WITH BODY JACKETS	100
C34 ANALYZE WORKLOAD REQUIREMENTS	100
J295 MEASURE PATIENTS FOR CUSTOM FOOTWEAR	100
I275 MODIFY SPINAL X-RAYS FOR BOSTON BUCKETS	100
I270 MODIFY BOSTON BUCKETS	100
H220 FIT PATIENTS WITH METAL AFOs	100
A2 DETERMINE OR SCHEDULE WORK PRIORITIES	100
A14 PLAN WORK ASSIGNMENTS	100